

SEQ ID NO.	BIALLELIC MARKER ID	ORIGINAL ALLELE	ALTERNATIVE ALLELE
1	20-828-311	C	T
1, 4	17-42-319	C	T
1, 2, 4	17-41-250	C	T
1	20-841-149	A	G
1	20-842-115	G	A
1	20-853-415	C	T

Figure 1

SEQ ID no.	Biallelic Marker ID	Original Allele	Alternative Allele	Position Range of Preferred Sequences
1	20-828-311	C	T	739-1739
1	17-42-319	C	T	10946-12958; 13470- 13526; 13641-13752
1	17-41-250	C	T	14271-17969
1	20-841-149	A	G	41718-42718
1	20-842-115	G	A	44942-45942
1	20-853-415	C	T	76558-77558
2	17-41-250	C	T	1-1879
4	17-42-319	C	T	1-1498; 1613-1724
4	17-41-250	C	T	2243-3940; 3941-5381

Figure 2

A

SEQ ID NO.	POSITION OF CONFLICT	NUCLEOTIDE
1	13269 (SEQ ID No 1)	T (original)
4	1241 (SEQ ID No 4)	C (alternative)

B

SEQ ID NO.	POSITION OF CONFLICT	NUCLEOTIDE
1	13475 (SEQ ID No 1)	G (original)
4	1447 (SEQ ID No 4)	A (alternative)

Figures 3A, 3B

SEQ. ID. NO	POSITION RANGE O MICROSEQUENCING PRIMERS	COMPLEMENTARY POSITIN RANGE OF MICROSEQUENCING PRIMERS
1	1220-1238	1240-1258
1	12328-12346	12348-12366
1	15222-15240	15242-15260
1	42199-42217	42219-42237
1	45423-45441	45443-45461
1	77039-77057	77059-77077
4	300-318	320-338
4	3194-3212	3214-3232

Figure 4

SEQ. ID NO.	POSITION RANGE OF AMPLIFICATION PRIMERS	COMPLEMENTARY POSITION RANGE OF AMPLIFICATION PRIMERS
1	929-949	1357-1377
1	12029-12050	12581-12603
1	14992-15012	15460-15482
1	42070-42090	42572-42591
1	45328-45347	45863-45883
1	76644-76664	77166-77185
4	1-11022	553-11575
4	899-11920	1441-12461
4	1246-12267	1632-12651
4	2964-13984	3432-14454

Figure 5

SEQ. ID NO	POSITION RANGE OF PFOBES
1	1227-1251
1	12335-12359
1	15229-15253
1	42206-42230
1	45430-45454
1	77046-77070
4	307-331
4	3201-3225

Figure 6

Alignment of ApoA IV-related cDNA with Human and Swine cDNA's

ApoA IV related	AGACGTGAGCAGAGCAGATAATGGCAAGCATGGCTGGCTGCTCACCTGGGCTCTGGCT-CTTCTTTAGGGTTTTCGGC	79
Human ApoA IV	AGTTCCCATCTGCAGG-----CAGGTG-AGCTCTCTCTGAGGACCT-CTCTGTGAGCTCCCTGATTGTAGGGAGG	68
Swine ApoA IV	-----GCA-----CAGGTG-AGCTG-DCTGAGAACCT-CTC-----CTCCAC-----GGAGG	39
ApoA IV related	CACCCAGGCACGAAAGGCTTCTGGACTACTTCAGCCAGACCCAGCGGGACAAAGGCAGGCTGGAGCAGATCCATCAGC	159
Human ApoA IV	CATCCAG-TGTGGCAA-----GAACTCTCTCCAGCC-----CAGCAAG-CAGCT-CAGGATG-----TTCCTGA-	124
Swine ApoA IV	-ACCCAG-TGCAGTAA-----GAGACATCTCCAGCC-----CAGCGGG-----AGCT-CAGGATG-----TTCCTGA-	93
ApoA IV related	AGAAGATGGCTGGGAGCCCGCAGCCCTGAAGACAGCCTTGAGGAAGACCTCAACAATAAGAACAGTTCCTGGAAAG	239
Human ApoA IV	AGGGCGTGGTCC-TGAGCCTG--GCCCTGG---TGGTGTGCGCCGAGCCAGGGC--TGAGGTGAG--TGCTGACCAGG	193
Swine ApoA IV	AGGTGTGGTCC-TGAGCCTG--GCCCTGG---TGGCCGTACCCGTTGCCCGGGC--TGAGGTCAA--TGCGACCAAG	162
ApoA IV related	CTGAGGCTTCTGAGTGGGAGCGAGCTCCTCGGCTCCACAGGACCGGCTGGGATGCGGCGCAGCTGCAGGAGGAGT	319
Human ApoA IV	T---GGCCACAG--TGAT-GTGGGACT-----ACCTCAGCCAG-CTGAGCAACAATGCCAAGGAGCGGT-GGAACATCT	260
Swine ApoA IV	T---GGTACTG--TGAT-GTGGGACT-----ACCTCAGCCAG-CTGGGAGCAATGCCAAGAAGGCTGT-GGAACATCT	229
ApoA IV related	GGAGGAGTGAAGGCTCGCTCCAGCCCTACATGGCAGAGGGGAGGAGCTGGTGGCTGGGAAATTGGAGGCTTGGCGG	399
Human ApoA IV	CCAG-AAATCTGAATCACC--CAGCAACTCA-----ATGCGCTC--TTCAGGAC--AAACTTGGAG-----	316
Swine ApoA IV	CCAG-AAGTCTGAGCTCACC--CAGCGCTCA-----ACATCTC--TTCAGGAC--AAACTTGGAG-----	285
ApoA IV related	AGCACTGAAGCCTACAGATGATCTGATGAGGAGGTGGCGCTGCGGTGCGAGGCTGCGAGGAGTGTGGGCTG	479
Human ApoA IV	--AAGTGAACACTTACGAGGTGACCTGCAGAAAGCTGGTGCCTTTGCCACGAGCTGCATGAAC-----GCCTG	387
Swine ApoA IV	--AAGTGAACACCTACAGGAGGACCTGCAGAAAGCTGGTGCCTTTGCCACGAGCTGCATGAAC-----GCCTG	356
ApoA IV related	GTGGGGAGAGACCAAGGCCAGTGTGGGGGGCTGGAGAGGCTTGGGCTTGGCTGAGGGACTGCAGAGCCGCGT	559
Human ApoA IV	GC--CAAGGACTCGGAGA--AACTG--AAGGAG-----GAGATTGGGAAGGAGCTGGAGGAGCTGAGGCGCGCT	452
Swine ApoA IV	AC--CAAGGACTCAGAGA--AGCTG--AAGGAG-----GAGATTGGAAGGAGCTGGAGGAGCTGCGAGCCCGGCT	421
ApoA IV related	GGTGACCAACCGGCGCTTCAAGAGCTCTTCCACCCATACGCGAGAGCCTG-GTGAGCGGCTCGGCGCCACCTG	638
Human ApoA IV	GCTGCCCCATGGCAAT-----GAGGTGAGCCAGAAAGTCCGGGACAACTCCGAGAGCTTCAGCAG-CGCC--T	518
Swine ApoA IV	GCTGCCCCACGCTTCC-----GAGGTGAGCCAGAAAAATCGAGACAACTGCGCGAGCTGCAGCAG-CGCC--T	487
ApoA IV related	CAGGAGTGTGACCTGAGTGTGGCTCGGACCGCCCGCAGGCGCGGCGCTCAGTGGCTGGCTGCAGGTGCTCTG	718
Human ApoA IV	--GGAGCC-CTACCGGAGCAGCT--GCGCACCCAGGTCAACAG-CAGGCC-GAGCAGCTGCG-----GCGC-CAGCTG	585
Swine ApoA IV	--GGGCCC-CTTTACGGGAGGGCT--GCGCACCCAGGTCAACACC-CAGGTT-CAGCAGCTGCA-----GCGC-CAGCTG	554
ApoA IV related	GAGCTCAGCTCAAGGCCAAGGCTCTGACCGACGATCCAGCAGAACTGGACAGCTGGGGAGAGCTGACGAG	798
Human ApoA IV	ACCCCTTACG--CAGAGC--GCATGGAGAGAGTGC-TGGGGAGAAC--GCCGACAGCCTGCAGGCTCTGGTGA	654
Swine ApoA IV	AAGCCCTTACG--CAGAGC--GCATGGAGTCCGTC-TACGGCAGAAC--ATCGCACTCGGAGGCTCTGGTGA	623
ApoA IV related	CCCTT-TGAGGACACTGGACTGAGGAAGGGCGCGCTCGGAGCCCCAGATGCTCTCGAGGAGGTGGCTGAGGACTCA	877
Human ApoA IV	CCCTTGGCGGAC--GAGCTCAAGGCCAAGATCGACCAAGAC-----GTGAGGAGCTCAAGGGAC-----	712
Swine ApoA IV	CCCTATGGCGAT--GAGTTCAAGGCCAAGATCGATCAGAA-----GTGAGGAGCTCAAGGGGA-----	681
ApoA IV related	GGCTTTCGGCAGGACCTTACCTGAGATAGCTGGCTTCACTGGGCGCATCGACCGAGACTGAGGAGGTTCAGGAC	957
Human ApoA IV	-GCCTTACG-----CCTAC-GCTGACGA--ATTCAAAGTCAAG--ATTGACCAAGCGTGGAGGAGCTGCGC-GC	777
Swine ApoA IV	-GCCTTACGC-----CCTAT--GGGAGGA--GCTCAAGGCAAG--ATCGATCAGAACGTGGAGGAGCTGCGGC-CC	746
ApoA IV related	AGTTGGGCGACCTCCACAGGCAAGTGGCTTGGCCCGAGATTTCACAAACAGACAGTGGCAAGGTTCTGAGCAAG	1037
Human ApoA IV	AGCCTG-GCTCCCTATGCT--CAGGACAGCCAGG--AGAAGCTCAACCACAGCT--TGAGGGCCTGA-----	838
Swine ApoA IV	AGCCTG-GCCCCCTATGG--CAGGAGCTCCAGG--AGAAGCTCAACCACAGCT--CGAGGGCCTGG-----	807
ApoA IV related	CTGACGGCGGCTCTGATGACCTGTGGGAGACATCACTCACAGGCTTATGACACGGGCGAGCCATCTGGGGAGCC	1117
Human ApoA IV	-----CCTTCCAGATGA-----AGAAGAACGCGA--GGAGC--TCAAGGCCAGGATCTCGGCCAG-TG-----	892
Swine ApoA IV	-----CCTTCCAGATGA-----AGAAGACGGGAGA--GGAGC--TGAAGGCCAAGATCTCGGCCAA-TG-----	861
ApoA IV related	CTGAGGATCTACTGCCCCAGGCCATTCCAGCTCCTGTCTGGGAGCCTTGGCTCTGAGGCTCTAGCATGTTTCACTG	1197
Human ApoA IV	CCGAGGAGCTGC-----GGCAGA--GGCT-----GGCGCCCTTGGCCGAGGAGCT--GGTGGC-ATA--G	945
Swine ApoA IV	CCGACGAGCTGC-----GGCAGA--AGCT-----GGTGGCGGTGGCCGAGAACGT--GCATGGC-CA--T	914
ApoA IV related	CTTCAAGTGGGCTGTGGGTGGAGGTTGAAGGCTCTGTGAGGACAGGAGGCCACAAAGGGGCTGTGTCTCTG	1277
Human ApoA IV	CTGAGGGGCAAC--ACCGAG-GGGCTGCAGAGTACTG-GCAGAGCTGGTGGGACCT--GGACCAGCAGTGGAGG	1018
Swine ApoA IV	CTGAAGGGCAAC--ACCGAG-GGGCTGCAGAGTACTG-CTGAGCTGAGAACCACT--GGACCAGCAGTGGAGG	987
ApoA IV related	ATATCCAGCTCTCTGGACTCCCAATCTGGATGATTAATTACAGGCTTTCGAAACCCAGCTCCAGTGTCTCAIT	1357
Human ApoA IV	AGTTCCGAGCGCGGTGGAGCCCTA--CGGGGAGAACTTCA--ACAAAGCCCTG--GTGCAGC-----AG-----A	1078
Swine ApoA IV	AGTTCCGCTCAAGGTGGAGCCCTA--CGGGGAGAACTTCA--ACAAAGCTTTG--GTGCAGC-----AG-----G	1047

Figure 7 A

Alignment of ApoA IV-related cDNA with Human and Swine cDNA's

ApoA IV related	TGGGAATGCTCATGAGTTACTCCATTCAAGGTGAGGGAGTAGGGAGGGAGAGGCACCATGCATGTGGGTGATTATCTGC	1437
Human ApoA IV	TGGAAACAGCTCAGGA-----CGAAACTGGGCCCCCATGCGGGGG-----ACGTGGAAGGCCACTGTG	1134
Swine ApoA IV	TGGAGGATCTCAGGC-----AGAAGCTGGGCCCTTTGGCGGGGG-----ACGTGGAGGGCCACCTG	1103
ApoA IV related	AAGGCTGTTTCCCGTGATGCTGGAAGGCTGTGCCACTACATCCTGGAGTTTGGCTCTAGTCACCTCTGGCTGCCTGGTGG	1517
Human ApoA IV	AGCTTCCTGGAGAAGGACCTGAGGGACAAGGTCA--ACTCCTT-----CTTCAG-CACCTTCAA-----GGAGA	1195
Swine ApoA IV	AGCTTCCTGGAGAAGGATCTGAGGGACAAGGTCA--ACACCTT-----CTTCAG-CACCTCAA-----AGAGG	1164
ApoA IV related	CCACTGCTACAGCTGGTCCACAGAGAGGAGGACTTGTGTCCCAGGGCTGCCATGGCAGCTATCAGGGGAATAGAAAGGA	1597
Human ApoA IV	-----AAGAGAGCCA-GGACAAGACT-CTCTCCCTCCCTGAGCTGGAGCAACAGC-----AGGAACAGCATCAG	1257
Swine ApoA IV	-----AGGCGAGCCA-GGGCCAGAGC-CAGGCCCTCCCT-----GCA-----	1199
ApoA IV related	GAAAGAGATATCTATGGGAGAACATGTGATGGTGTGTGAATATCCCTGCTGGCTCTGATGCTGGTGGGTAGGAAAGGTG	1677
Human ApoA IV	GAGCAGCAGCAGGAGCAGGTGCAGATGCTGGCCCCCTTTGGAGAGCTGAGCTGCCCTGGTGCA--CTGGCCCCACCTTGG	1335
Swine ApoA IV	-----CAGGAGAAAGGGCAG-----GCCCTTTGGAGGGCTGAGCTGCCCTGGTGCT--CCCACCCACCCCTG	1262
ApoA IV related	TGGGCTGTGATAGGAGAGGGCAGAGCCCATGTTTCTCTGACATAGCTCTACACCTAAATAAGGGACTGAACCTTCCCAACT	1757
Human ApoA IV	TGGAC-----ACCTGC-----CCTGCCCT-GCC-----ACCT-----GTCTGT-CTGTCCCAA--	1376
Swine ApoA IV	---AC-----ACCTGC-----CCTGCCCT-GCCCCTGTCT-----GTCTGT-CTGTCCCAA--	1304
ApoA IV related	GTGGAGCTGCTTAAACCCCTCTGGGAGCATACTGTGTGCTCTCCCATCTCCAGCCCTCCTCTGGGTTCCTCAAGTGG	1837
Human ApoA IV	---AGAAGTTC-TGGTATGAACCTGAGGACACA-----TGTCAGTGGGAGGTGAGACCACCTCTCAA--TAITCAA--TA	1444
Swine ApoA IV	---AGCAGTTC-TGTACAAAGCTAGGGATACA-----TGTCAGTGGACCGTGACACTACCTCTGCA--TACTCAA--TA	1372
ApoA IV related	AAGCTAGACTTCTGGCTCAATGAAATAGATGTTTATGATA	1879
Human ApoA IV	AAGCT-----GCTGAGA--ATCTAGCC-----TC	1466
Swine ApoA IV	AAGCT-----GCTGAGA--AACT	1388

Figure 7 B

Alignment of ApoA IV-related protein with Human and Swine ApoA IV

ApoA IV related	MASMAVLTWALALISA---FSATQARKGFWDYFSQTSGD-KGRVETIHQQKMAREPATIL-KLSLEODLNNMNKFLKIL	74
Human ApoA IV	MFLKAVVLTALVAVAGARAEEVSADQVATVMWDYFSQLSNNAKAEVHLQKSELTOQNALFQDKLGEVNTYAGDLQKKL	80
Swine ApoA IV	MFLKAVVLSLALVAVTGARAEEVNDQVATVMWDYFSQSGSNARKAVEHLQKSELTOQNTLFDQDKLGEVNTYTEDLQKKL	80
ApoA IV related	RRLSGSEAPRIPOIPVGMRRQLQEELEEVKARIQRYMAEAHELVAHLYGNILEGIRQQPKPYTMDIMEQVALRVQELQEQLRVV	154
Human ApoA IV	VPFATELHERLAKDSEKLKEEIGKELEELRARLLPHANEVSQKIGDNLRELQQRLEPYADQLRTQVNTQAEQIRRLQITPY	160
Swine ApoA IV	VPFATELHERLTKDSEKLKEEIRRELEELRARLLPHATEVVSQKIGDNLRELQQRIGHFGGLRTQVNTQVQQLQRQIRPY	160
ApoA IV related	GEDTKAQILGGVDEAWLIL---QGIQSRVVVHHTGTFELFHPYASGVSGIGRHVQEHRSVAHPAPASPARISRCVQV	230
Human ApoA IV	QRMERVLRENADSTQASLRPHADELKAKIDQNVVELKGRITPYADEFKVIKIDQTVVEELRRSLAPYAQTQEKLNHQLEG	240
Swine ApoA IV	AERMESVLRQNI RNLEASVAFYADEFKAKIDQNVVELKGSILTPYAEELKAKIDQNVVEELRRSLAPYAQVQEKLNHQLEG	240
ApoA IV related	LSRKLTLLKAKAHARIQQNLQLREELSRAPAGT-----GTEGAGDPDPOMISEEVRQLQAFQDITYLOIAAETRAIDQ	305
Human ApoA IV	LTQMKNNAEELKARISASAEELRQLALAEADVRGNIRGNTGLOKSLAEIIGCHLDQQVEEFRRRVEPYGENFNKALVQ	320
Swine ApoA IV	LAFQMKQAEEELKAKISANADELRQLVFAENNVHGHILKGNTEGLQKSLILEIRSHLDQQVEEFRLLKVEPYGETFNKALVQ	320
ApoA IV related	ETEVQQLAIPPPGHSAFAPEFQQTDSGKVLKQLARLDDLWEDIHHSIL-----HDQGHSHLGDIF	366
Human ApoA IV	QMEQLRTKLGPAGDVEGHLSFLEKDLRDKNVFFSFTPEKESESODKTLISLPELQQQEQHQEQQQEQVQVMLAPLES	396
Swine ApoA IV	QVEDLRQKLGPAGDVEGHLSFLEKDLRDKNVTFPSTLKEEASQGQSQALPAQEKAAQ-----APLEG	382

Figure 8

Alignment of ApoA IV-related cDNA with Rat RAP3 cDNAs

ApoA IV related	AGACGTGAGCAGAGGAGATAATGGCAAGCATGGCTGCGGTGCTCACCTGGGCTCTGGCTCTTCTTTTCAGGGTTTTCGGCC	80
Rat RAP3 A	-----GC--ATCGTGGAAAGCATGGCTGCGGTGCTCACCTGGGCACTCGCCCTCTCTCAGTGTTCGCAACT	65
Rat RAP3 B	-----GC--ATCGTGGAAAGCATGGCTGCGGTGCTCACCTGGGCACTCGCCCTCTCTCAGTGTTCGCAACT	65
ApoA IV related	ACCCAGGCAACGAAAGGCTTCTGGGACTACTTACGCCAGAACAGCGGGACAAAGGCAAGGTGGAGCAGATCCATCAGCA	160
Rat RAP3 A	GTACAGGCGAGGAAGAGCTTCTGGGAGTACTTCGGCCAGAAACAGCCAGGGCAAGGCATGATGGGCCAG-----CAGCA	139
Rat RAP3 B	GTACAGGCGAGGAAGAGCTTCTGGGAGTACTTCGGCCAGAAACAGCCAGGGCAAGGCATGATGGGCCAG-----CAGCA	139
ApoA IV related	GAAGATGGCTGGGAGCCCGCACTCTGAAAGACAGGCTTGAGCAAGACCTCAACAATATGAACAAGTTCTGGAAAAGC	240
Rat RAP3 A	GAAGCTGGCACAGGAG-----AGCCTGAAAGGTAGCTTGAGCAAGACCTCTACAATATGAACAATTTCTAGAAAAGC	213
Rat RAP3 B	GAAGCTGGCACAGGAG-----AGCCTGAAAGGTAGCTTGAGCAAGACCTCTACAATATGAACAATTTCTAGAAAAGC	213
ApoA IV related	TGAGGCTCTGAG-----TGGGAGGAGGCTCTCGGCTCCACAGGACCCGGTGGGCATGCGGCGGCACTGCGAGG	314
Rat RAP3 A	TGGGACCTTGAGAGAGCCTGGGAAGGAGCCTCTCGGCTGGCACAGGATCCAGAAGGCATTGGAAAGCAGTTGAGCAAA	293
Rat RAP3 B	TGGGACCTTGAGAGAGCCTGGGAAGGAGCCTCTCGGCTGGCACAGGATCCAGAAGGCATTGGAAAGCAGTTGAGCAAA	293
ApoA IV related	GAGTTGGAGGAGGTGAAGGCTTCGCTCCAGCCCTACATGGCAGAGGCGCAAGGCTGGTGGGTGGAAATTTGGAGGGCT	394
Rat RAP3 A	GAGCTGGAGGAAGTGAGCACACGCTGGAGCCCTACATGGCTGCAAGCAACAGCAGGTGGCTGGGTGGAAATTTGGAGGGCT	373
Rat RAP3 B	GAGCTGGAGGAAGTGAGCACACGCTGGAGCCCTACATGGCTGCAAGCAACAGCAGGTGGCTGGGTGGAAATTTGGAGGGCT	373
ApoA IV related	GCGGCAGCAACTGAAGCCCTACACGATGGATCTGATGGAGCAGGTGGCCCTGCGGTGACAGGCTGACAGGACAGTTGC	474
Rat RAP3 A	GAGGCAGCAGTTGAACCCCTACACGCTCGAGCTGATGGAGCAGGTAGGCGCTGAGCGTGACAGGATCTGCAAGAACAGCTGC	453
Rat RAP3 B	GAGGCAGCAGTTGAACCCCTACACGCTCGAGCTGATGGAGCAGGTAGGCGCTGAGCGTGACAGGATCTGCAAGAACAGCTGC	453
ApoA IV related	GGGTGGTGGGGGAAGACACCAAGGCCAGTTGCTGGGGGGCGTGGAAGAGGCTTGGGCTTTGCTGCAGGAGCTGCAGAGC	554
Rat RAP3 A	GCATGGTGGGAAAAGGCACCAAGGCCAGCTCTGGGGGGCGTGATGAGGCGATGAGCCTGCTGCAGGATATGCAAAAGT	533
Rat RAP3 B	GCATGGTGGGAAAAGGCACCAAGGCCAGCTCTGGGGGGCGTGATGAGGCGATGAGCCTGCTGCAGGATATGCAAAAGT	533
ApoA IV related	CGGTGGTGCAACCAAGGCGCTTCAAAAGAGCTCTTCCACCCATAGCGGAGAGGCTGGTGAGCGGATGGGGGCCA	634
Rat RAP3 A	CGAGTGTGCAACCAAGGCGCTTCAAAAGAGCTCTTCCACCCATAGCGGAGAGGCTGGTGAGCGGATGGGGGCCA	613
Rat RAP3 B	CGAGTGTGCAACCAAGGCGCTTCAAAAGAGCTCTTCCACCCATAGCGGAGAGGCTGGTGAGCGGATGGGGGCCA	613
ApoA IV related	CGTGAGGAGCTGCACCGGAGTGTGGCTCGGACGGCCCGGCCAGCCCGCGGCTCAGTGCTGCGTGCAGGTGCTCT	714
Rat RAP3 A	TGTGAGGAGCTGCACCGGAGTGTGGCTCGGACGGCCCGGCCAGCCCGCGGAGCTCAGTGCTGCGTGCAGACCTGT	693
Rat RAP3 B	TGTGAGGAGCTGCACCGGAGTGTGGCTCGGACGGCCCGGCCAGCCCGCGGAGCTCAGTGCTGCGTGCAGACCTGT	693
ApoA IV related	CCCGGAAGCTCAGGCTCAAGGCTAAGGCTCTGCAAGGAGCATCCAGGAAACCTGGAACAGCTGCGGAGAGCTCAGC	794
Rat RAP3 A	CCCAAACTCACAGCTAAGGCGAAGGACTTGCAACACAGCATCCAACGCAACCTGGATCAGCTGCGAGATGAGCTCAGT	773
Rat RAP3 B	CCCAAACTCACAGCTAAGGCGAAGGACTTGCAACACAGCATCCAACGCAACCTGGATCAGCTGCGAGATGAGCTCAGT	773
ApoA IV related	AGA---GCCTTTGACAGGCAD---TGGGACTGAGGAGGGGCGGCGCGGACCCCGAGATGCTCTCGAGGAGGTCCGCCA	868
Rat RAP3 A	ACCTTCATCGTGTGAGCACAGACGGGGCAGACAAACAGAGACTCCCTGGACCCTCAAGCTCTCTCTGACGAGGTCCGCCA	853
Rat RAP3 B	ACCTTCATCGTGTGAGCACAGACGGGGCAGACAAACAGAGACTCCCTGGACCCTCAAGCTCTCTCTGACGAGGTCCGCCA	853
ApoA IV related	GCGACTTCAGGCTTTCCGCGGACACCTACCTGCAGATAGCTGCTTCACTCGCGCCATGACACAGGAGATGAGGAGG	948
Rat RAP3 A	GAGACTCCAGGCTTTTCGACATGACACCTACCTGCAGATCGCTGATTCACTCAGGCCATTGACACAGGAGACCGAGGAAA	933
Rat RAP3 B	GAGACTCCAGGCTTTTCGACATGACACCTACCTGCAGATCGCTGATTCACTCAGGCCATTGACACAGGAGACCGAGGAAA	933
ApoA IV related	TCCAGCAGCAGCTGGGCGCACCTTCAACAGGCCACAGTGCCCTTCGCCCCAGAGTTTCAACAAACAGACAGTGGCAAGGT	1028
Rat RAP3 A	TCCAGCAGCAGCTGGCACCAACCCCGCTAGCCACAGCGCCTTCGCTCCAGAGTTGGGACACTCAGACAGTAATAAGGCC	1013
Rat RAP3 B	TCCAGCAGCAGCTGGCACCAACCCCGCTAGCCACAGCGCCTTCGCTCCAGAGTTGGGACACTCAGACAGTAATAAGGCC	1013
ApoA IV related	CTGAGCAAGCTGCAGGCGCTTCTGGATGACCTTGCGGAAGACATCACTCTCAGCCTTCATGACACGGGCCACAGCCATCT	1108
Rat RAP3 A	CTGAGCAGACTGCAGAGCGGCTGGAGAGCTCTGGGAAGATATTGCTATGGCCTTCATGACACGGGCCATAGTCA---	1090
Rat RAP3 B	CTGAGCAGACTGCAGAGCGGCTGGAGAGCTCTGGGAAGATATTGCTATGGCCTTCATGACACGGGCCATAGTCA---	1090
ApoA IV related	GGGGGACCCCTGAGGATCTACCTGCGCAGGCCATTTTC---CAGCTCCTTGTCTGGGAGCCTTGGCTCTGAGCCTCTAGCA	1187
Rat RAP3 A	---GAATAACCTGAGGGTC-----ACTCAGTTAACTCTGCAGCTGTTGTCTGGA-----CCCTGAGCCTTCAGCA	1155
Rat RAP3 B	---GAATAACCTGAGGGTC-----ACTCAGTTAACTCTGCAGCTGTTGTCTGGA-----CCCTGAGCCTTCAGCA	1155

Figure 9 A

Alignment of ApoA IV-related cDNA with Rat RAP3 cDNAs

ApoA IV related	TGGTTCAGTCCTTGAAAGTGGCTGTGGGTGGAGGGTCTGTCAGGACAGG-GAGGCCACCAAGGGCTG	1266
Rat RAP3 A	TGG-----CCTAATAGGCAGAGGGTGGAGGGTCTGCATACTATTGGCGAGGCCACCAAGGTGCTG	1217
Rat RAP3 B	TGG-----CCTAATAGGCAGAGGGTGGAGGGTCTGCATACTATTGGCGAGGCCACCAAGGTGCTG	1217
ApoA IV related	CTGTCTCGTGCATATCCAGCCTCCTGGACTCCCAATCTGGATGCATTACATTCCAGGCTTTGCAAAACCCAGGCTCC	1346
Rat RAP3 A	CTG-CCCCAACCTGTCTGGCCTCCT-CAACTCCCCCACTCAGGTGCATTACACTCAGTAGGTTTGGCAAAACAGGTTCC	1295
Rat RAP3 B	CTG-CCCCAACCTGTCTGGCCTCCT-CAACTCCCCCACTCAGGTGCATTACACTCAGTAGGTTTGGCAAA-----	1285
ApoA IV related	CAGTGCTCATTGGGAATGCTCATGAGTTACTCCATTCAAGGGTGAGGGAGTAGGGAGGGAGAGGCCCATGCAATGGG	1426
Rat RAP3 A	GGTGCTCATTGGGA-TCTTAAGGAG-----CAAGAGTG-GGGTGAAGGAGTGGGAG-ATGGTGTGGGGGG	1361
Rat RAP3 B	-----	1285
ApoA IV related	TGATATCTGCAAGCC--TGTTTGGCGTATGCTGGAGCCTGTGCCACTACATCCTGGAGTTTGGCTCTAGTCACTTGT	1504
Rat RAP3 A	AGACTGACTGCAAGCCAGTACTTGAC-CGTTGCTAGAAACCTGTGTCACTACAACTGGAGCCCGCTCCTATTACTTGA	1440
Rat RAP3 B	-----	1285
ApoA IV related	GGCTGCCTGGTGGCCACTGCTACAGCTGGTCCACAGAGAGGAGCACTTGTCTCCCAGGGCTGCCATGGCAGTATCAGG	1584
Rat RAP3 A	---TGCCTGATGGTGGCTGTTATAGTGGTGTACAGAGGGGAACTCCTGTCTCCCAGGGTTGTGATGACAGCCTTGT	1517
Rat RAP3 B	-----	1285
ApoA IV related	GGAAATAGAGGGAGAAAGAGAAATATCATGGGGAGAACATGTGATGGTGTGTGAATATCCCTGCTGGC---TC--TGATG	1658
Rat RAP3 A	GGAAAGAGGCAGGAGAAATGATGACGATGATGGAGTGTGTACATCCCTGCCAGTGGTCTGCTGGGGGAATCAGTGATG	1597
Rat RAP3 B	-----	1285
ApoA IV related	---CTGGTGGGTACG-----AAAGGTG---TGGG---CTGTGATAGGAGAGGGCAGAGCCCATGTTTCTTGACATA	1720
Rat RAP3 A	GGATAAATGTGTGATCCCTGCGTGGTCTCTGCTGGGGATCAGTGATGGGATGGGCAGAGCCCATTTCTCTAGAGA	1677
Rat RAP3 B	-----	1285
ApoA IV related	GCTCTACCTTAATAAGGGACTGAAACCTGCCAAGTGTGGAGCTCCTTAAA-CCCTCTGGGGAGCATACTGTGTGCTG	1799
Rat RAP3 A	ACTCTA-ACCCAAATAAGGAACCTGACCCCTCTT-CCAGTGAGGCTTCTGAANAACCTGTACATAGCAACTGTGTGGCC	1754
Rat RAP3 B	-----	1285
ApoA IV related	TCCCCATC-TCCAGCCCCTCCCTCTGGTTCCAAAGTTGAAGCCTAGACTTCTGGCTCAAATGAAATAGATGTTTATGAT	1878
Rat RAP3 A	TCTTCATCATGCAGTCCCACTCTGATTCTGGGATGGAACT--GACTTTTGGTTGGAATGAAATAGACGTCATGAT	1832
Rat RAP3 B	-----	1285
ApoA IV related	-----	1879
Rat RAP3 A	GGAAAAAAAAAAAAAAAA	1850
Rat RAP3 B	-----	1300

Figure 9 B

Alignment of ApoA IV-related protein to Rat RAP3 proteins

ApoA IV related Rat RAP3 A Rat RAP3 B	MA S M A A V L T W A L A L L S A F S A T Q A R K G F W D V F S Q T S G D K G R V E Q I H Q Q K M A R E R A T L K D S L E Q D L N N M N K F L E K L R P L - - S 78 M A - - - A V I T W A L A L L S V F A T V Q A R K S F W E Y F G Q N S Q G K G M M G Q - - Q Q K L A Q E S - - L K G S L E Q D L Y N N M N F L E K L G P L R E P 73 M A - - - A V I T W A L A L L S V F A T V Q A R K S F W E Y F G Q N S Q G K G M M G Q - - Q Q K L A Q E S - - L K G S L E Q D L Y N N M N F L E K L G P L R E P 73
ApoA IV related Rat RAP3 A Rat RAP3 B	G S E A P R L P Q D P V G M R R Q L Q E E L E E V K A R L Q P Y N A E A H E L V G W N L E G L R Q Q L K P Y T M D L M E Q V A L R V Q E L Q E Q L R V V G E D I T 158 G K E P P R L A Q D P E G I R K Q L Q Q E L E E V S T R L E P Y M A A K H Q Q V G W N L E G L R Q Q L K P Y T V E L M E Q V G L S V Q D L Q E Q L R M V G K G T 153 G K E P P R L A Q D P E G I R K Q L Q Q E L E E V S T R L E P Y M A A K H Q Q V G W N L E G L R Q Q L K P Y T V E L M E Q V G L S V Q D L Q E Q L R M V G K G T 153
ApoA IV related Rat RAP3 A Rat RAP3 B	K A Q L L G G V D E A M A L L Q G L Q S R V V H H T G R E K E L F H P Y A E S L V S G I G R H V Q E L H R S V A P H A P A S P A R L S R C V Q V L S R K L T L K 238 K A Q L L G G V D E A M S L L Q D M Q S R V L H H T D R V K E L F H P Y A E R L V T G I G H H V Q E L H R S V A P H A V A S P A R L S R C V Q T L S H K L T R K 233 K A Q L L G G V D E A M S L L Q D M Q S R V L H H T D R V K E L F H P Y A E R L V T G I G H H V Q E L H R S V A P H A V A S P A R L S R C V Q T L S H K L T R K 233
ApoA IV related Rat RAP3 A Rat RAP3 B	A K A L H A R I Q N L D Q L R E E L S R A F - - - A G T G T E E G A G P D P Q M L S E E V R Q R L Q A F R Q D T Y L Q I A A F T R A I D Q E T E E V Q Q Q L A 315 A K D L H T S I Q R N L D Q L R D E L S - T F I R V S T D G A D N R D S L D P Q A L S D E V R Q R L Q A F R H D T Y L Q I A A F T Q A I D Q E T E E I Q H Q L A 312 A K D L H T S I Q R N L D Q L R D E L S - T F I R V S T D G A D N R D S L D P Q A L S D E V R Q R L Q A F R H D T Y L Q I A A F T Q A I D Q E T E E I Q H Q L A 312
ApoA IV related Rat RAP3 A Rat RAP3 B	P P P P G H S A F A P E F O O T D S G K V L S K L Q A R L D D L W E D I T H S L H D Q G H S H L G - - - D P 366 P P P P S H S A F A P E L G H S D S N K A L S R L Q S R L D D L W E D I A Y G L H D Q G H S Q N N P E G H S G 367 P P P P S H S A F A P E L G H S D S N K A L S R L Q S R L D D L W E D I A Y G L H D Q G H S Q N N P E G H S G 367

Figure 10

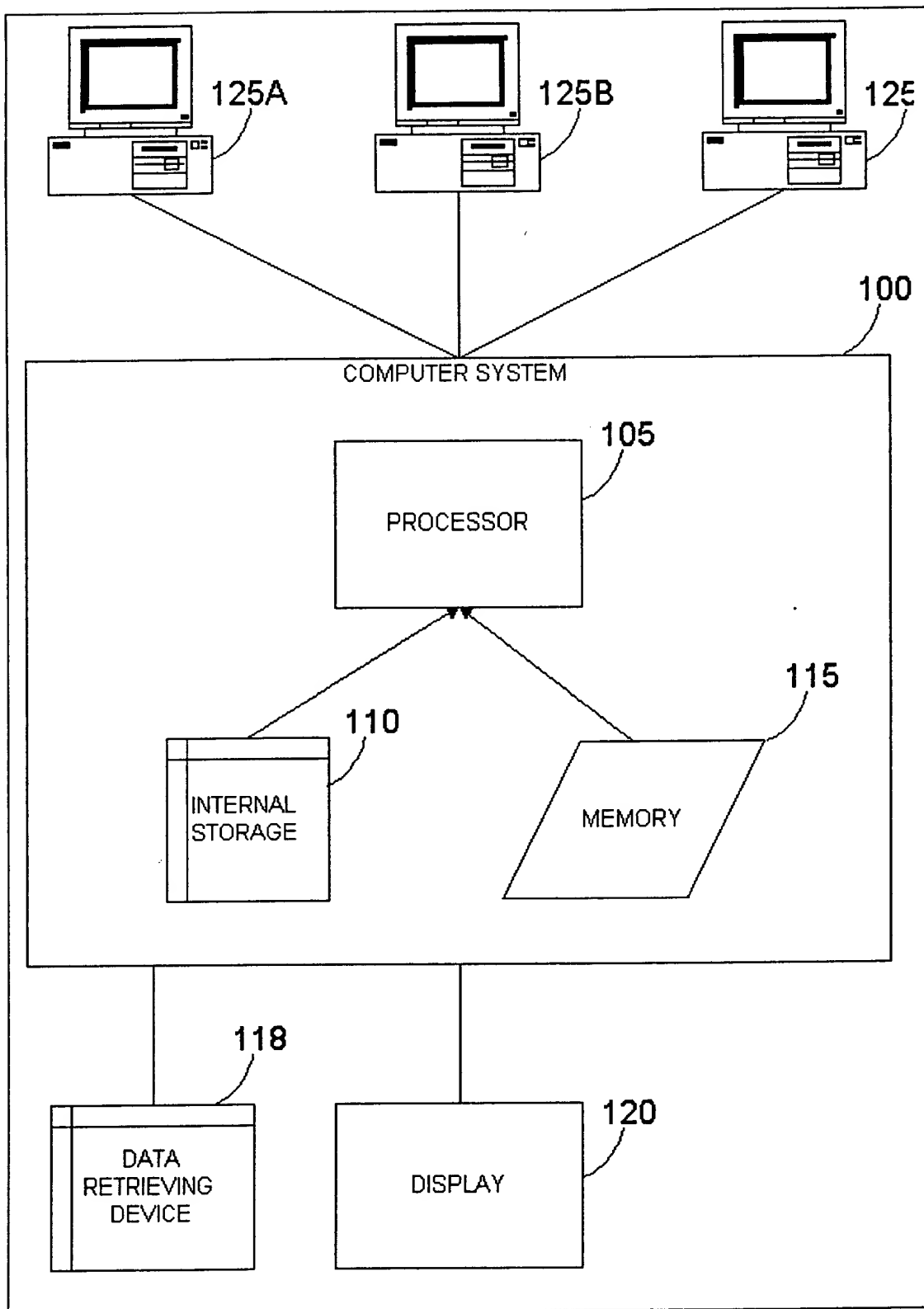


Figure 11

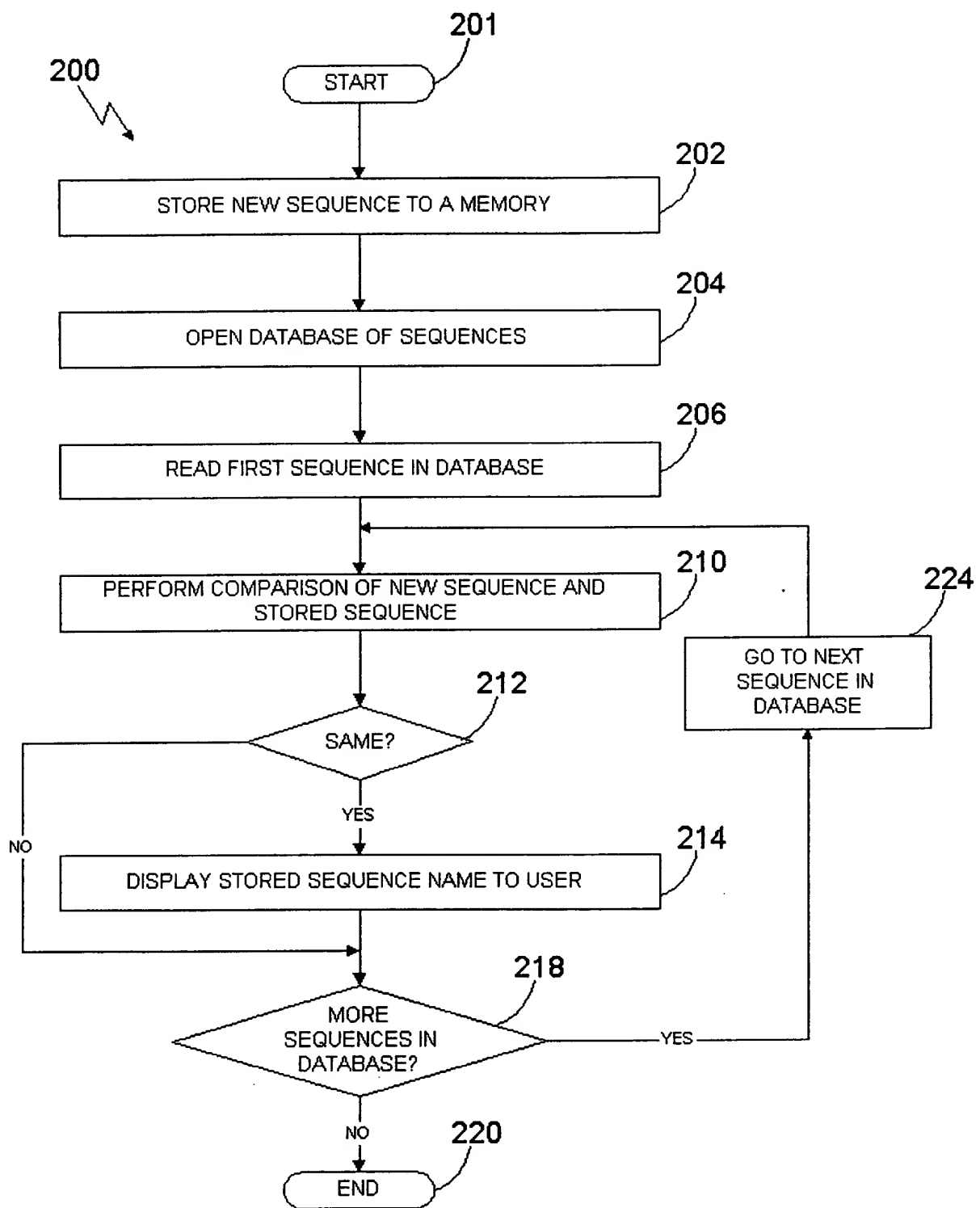


Figure 12

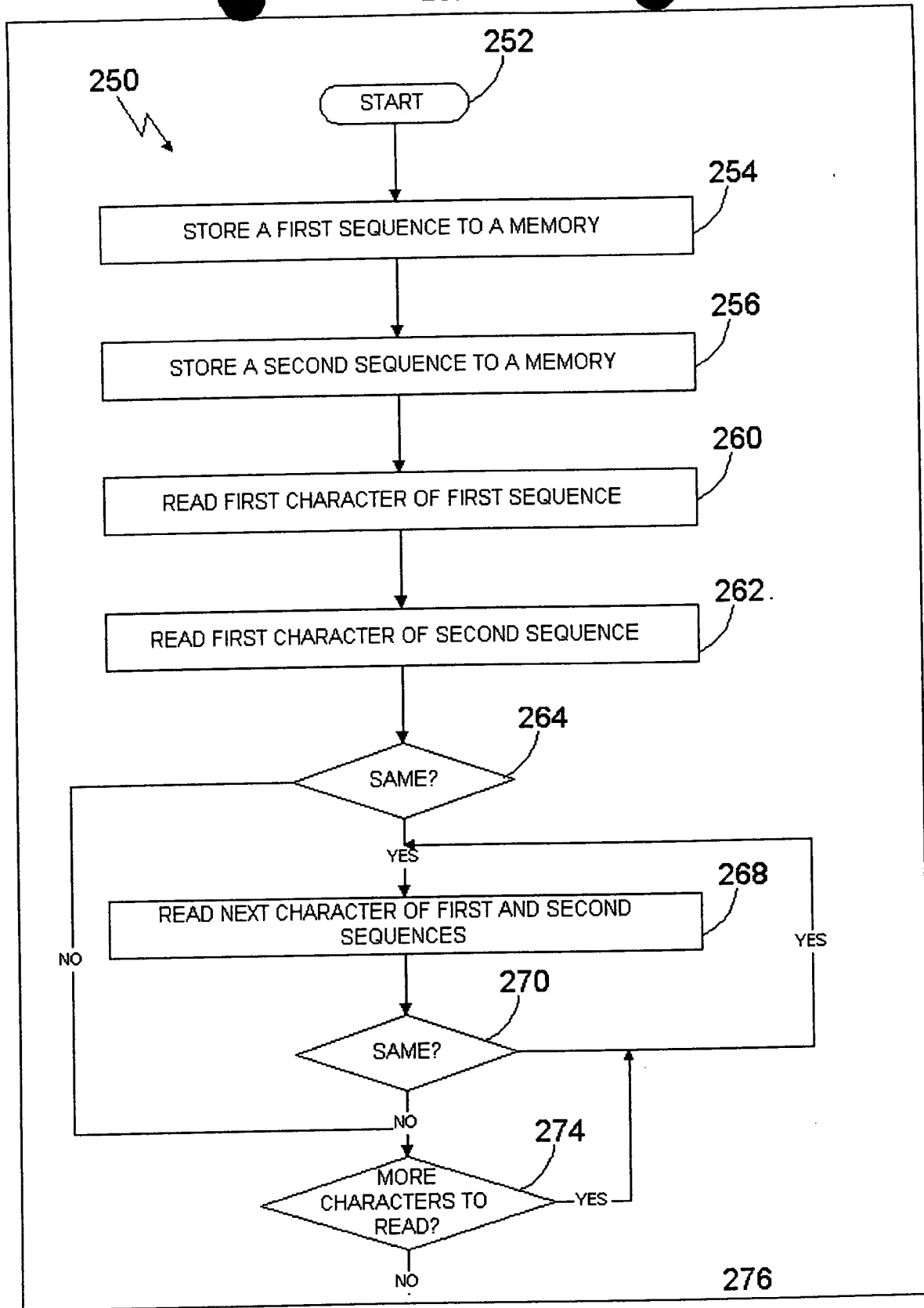


Figure 13

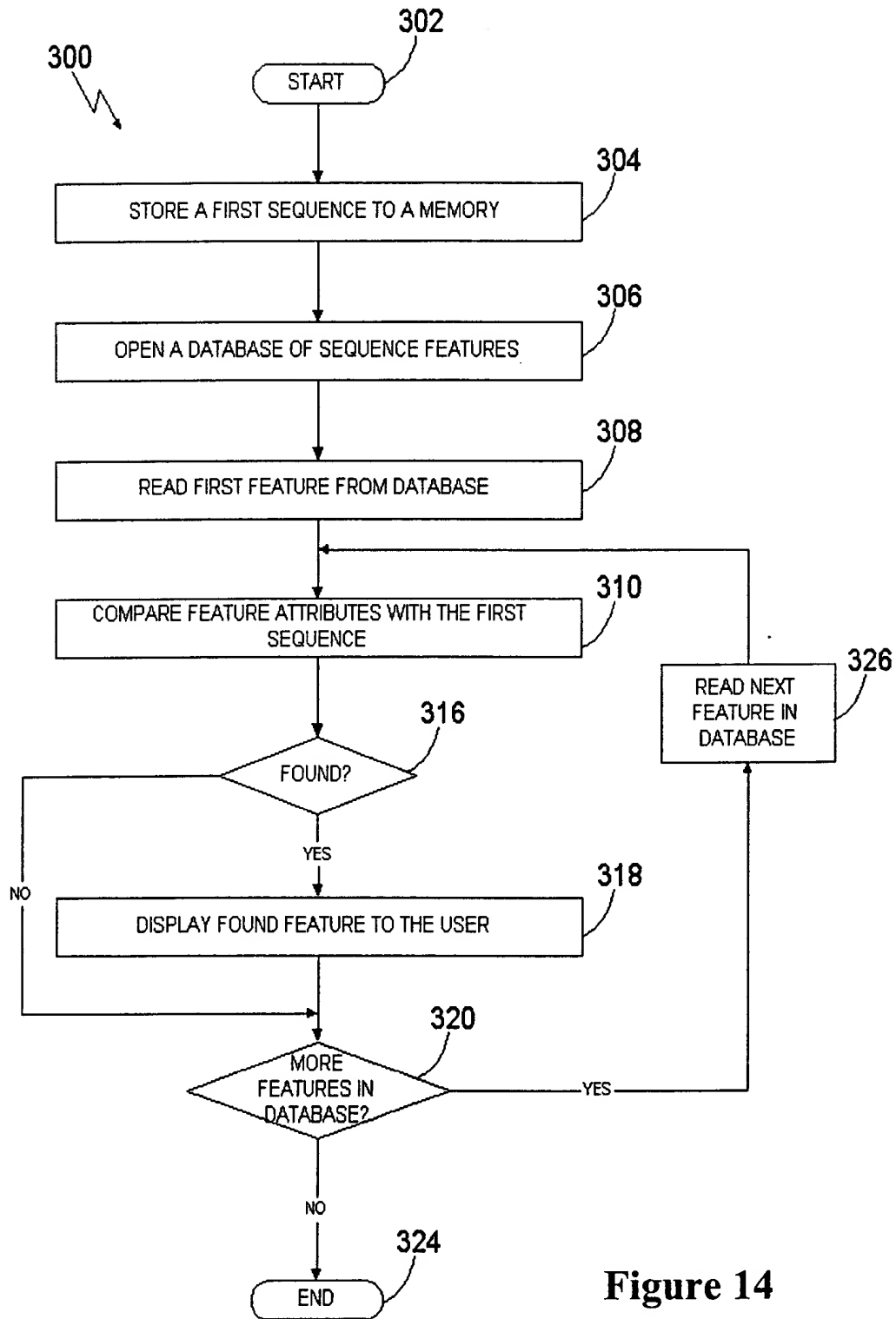


Figure 14